

Title (en)  
METHOD FOR WELDING RELATIVELY SMALL PARTS

Publication  
**EP 0365180 A3 19910911 (EN)**

Application  
**EP 89310213 A 19891005**

Priority  
US 25902488 A 19881017

Abstract (en)  
[origin: EP0365180A2] Laser welding of an outer sleeve 14 to an inner fiber ferrule 12 is expedited by, first, machining a thinned region 18 in the outer diameter of the sleeve. After the ferrule has been inserted in the sleeve, the thinned region permits the laser to fuse through the sleeve and melt part of the ferrule, as is required for laser welding of ferrule for the sleeve. The thinned region is preferably made by using a rotary cutter to cut an axially extending slot in the outer sleeve, which permits a succession of laser welds 21 in the axial direction in the slot. In a preferred embodiment, thinned regions 18, 19 are made on opposite sides of the outer sleeve, and laser welding is performed simultaneously on both sides of the sleeve so as to avoid distortions caused by thermal stress asymmetries.

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**G02B 6/36**; **B23K 26/00**

IPC 8 full level  
**B23K 26/00** (2006.01); **B23K 26/20** (2006.01); **B23K 26/22** (2006.01); **G02B 6/38** (2006.01); **G02B 6/42** (2006.01)

CPC (source: EP KR US)  
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**G02B 6/3874** (2013.01 - EP US); **G02B 6/4248** (2013.01 - EP US)

Citation (search report)  
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• [Y] DE 3429282 A1 19850411 - SIEMENS AG [DE]  
• [E] EP 0345874 A1 19891213 - KONINKL PHILIPS ELECTRONICS NV [NL]  
• [Y] PATENT ABSTRACTS OF JAPAN, vol. 12. no. 42 (P-663)[2889], 6th February 1988; & JP-A-62 187 807 (MATSUSHITA ELECTRIC) 17-08-1987

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**US 4859827 A 19890822**; CA 1324820 C 19931130; DE 68925262 D1 19960208; DE 68925262 T2 19960515; EP 0365180 A2 19900425;  
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